



CURRICULUM VITAE

Paul J. Godowski, Ph.D.
Genentech, Inc.
Department of Immunology
1 DNA Way, MS 34
South San Francisco, CA 94080
(650) 225-1407

Home Address

25 Orange Court
Hillsborough, CA 94010

PROFESSIONAL HISTORY

| | |
|---|--|
| August, 2003- Present | Staff Scientist, Department of Immunology (Joint Appointment with Department of Molecular Biology) Genentech, Inc South San Francisco, CA 94080 |
| August, 2002-August, 2003 | Staff Scientist, Department of Molecular Biology, Genentech, Inc South San Francisco, CA 94080 |
| September 1999-August, 2002 | Senior Director, Genomic Technologies, Genentech, Inc. South San Francisco, CA 94080 |
| July 1995-September 1999 Biology | Director, Department of Molecular Genentech, Inc. South San Francisco, CA 94080 |
| November 1993-July 1995 | Director, Department of Cell Genetics Genentech, Inc. South San Francisco, CA 94080 |
| October 1992-November 1993 Genetics | Sr. Scientist, Department of Cell Genentech, Inc. South San Francisco, CA 94080 |
| September 1989-October 1992 Genetics | Scientist, Department of Cell Genentech, Inc. South San Francisco, CA 94080 |

October 1988-September 1989 Scientist, Department of
Developmental Biology
Genentech, Inc.
South San Francisco, CA 94080

October 1985-October 1988 Postdoctoral Fellow
Advisor: Dr. Keith R. Yamamoto
Department of Biochemistry and
Biophysics
University of California, San
Francisco
San Francisco, California

EDUCATION

1985 Ph.D. Microbiology and Molecular Genetics
Advisor: Dr. David Knipe
Department of Microbiology and Molecular Genetics
Harvard University Medical School,
Boston, Massachusetts

JOB RESPONSIBILITIES

As a Director and Senior Director of Research, I supervised the activities of up to 160 employees in the Departments of Molecular Biology, Cell Biology, Protein Chemistry, Bioinformatics and Assay & Automation Technology within the Technology Branch of Genentech Research. I reported directly to the Senior Vice President of Research. The responsibilities of these Departments were broad, extending from early stage Research through support of Development projects. The major effort in the from 1996-2001 focused on Genomics, in particular the identification, cloning, sequencing, expression and functional analysis of several thousand human genes encoding secreted proteins and transmembrane receptors. The functional areas covered within these Departments included development of programs to search EST and Genomic Databases for genes based on homology, structure or other features of interest, database design for all of Research, the DNA microarray facility (in house microarray efforts and

commercial arrays (Affymetrix, Agilent), all aspects of microarray data analysis and mining, DNA sequencing, protein expression (mammalian, baculovirus, and bacterial), protein purification, functional analysis of novel cytokines and receptors, high throughput cell-based assays, development of antibody-based assays, evaluation and support of robotic equipment for Research and Development, and the Research FACS and Confocal Microscopy facilities. We worked closely to coordinate our efforts with Research Discovery Departments. As a member of the Research Review Committee (composed of 6 representatives from Research) I set strategic and tactical direction for all projects in Research.

The goal of our genomic program at Genentech was two-fold. The first goal was to identify and patent a large number of novel secreted proteins. The second goal was to develop a technological infrastructure within Research that would facilitate our capacity to turn those gene discoveries into drugs. Following the successful completion of these goals, I was promoted to Staff Scientist and established a Research Program to develop drugs for diseases with an Immunological basis as an out growth of my interest in the TLR receptor family. I currently head an effort to target the innate immune system, and in particular, myeloid cells, in autoimmune diseases.

In addition to my responsibilities within Research I also work closely with our Legal Department to establish our strategy for filing patents, with our Business Development Group to review in-licensing opportunities and structured our external Research contracts (for example, I was the lead person on our multimillion dollar contract with Gene Logic and Celera. I meet regularly with our Clinical Group to evaluate our Research directions. I often presented our programs to the Genentech Executive Committee, the Board of Directors, the Scientific Resource Board, and to many other functional areas within Genentech. I also represented Genentech at external Scientific and Financial forums.

THIS PAGE BLANK (USPTO)

Curriculum Vitae
Paul J. Godowski

PUBLICATIONS

1. Spang, A.E., Godowski, P.J. and Knipe, D.M. (1983) Characterization of herpes simplex virus 2 temperature-sensitive mutants whose lesions map in or near the coding sequences for the major DNA-binding protein. J. of Virol. 45:332-342.
2. Godowski, P.J. and Knipe, D.M. (1983) Mutations in the major DNA-binding protein of herpes simplex virus type 1 result in increased levels of viral gene expression. J. of Virol. 47:478-486.
3. Godowski, P.J. and Knipe, D.M. (1985) Identification of a herpes simplex virus function that represses late gene expression from parental viral genomes. J. of Virol. 55:357-365.
4. Godowski, P.J. (1985) Regulation of herpes simplex virus type 1 gene expression. Ph.D. Thesis, Harvard University, Cambridge, Massachusetts.
5. Godowski, P.J. and Knipe, D.M. (1986) Transcriptional regulation of herpes simplex virus type 1 gene expression: Gene functions required for positive and negative regulation. Proc. Natl. Acad. Sci. U.S.A. 83:256-260.
6. Miesfeld, R., Rusconi, S., Godowski, P.J., Maler, B., Okret, S., Wikstrom, A-C., Gustafsson, J-A. and Yamamoto, K.R. (1986) Genetic complementation of a glucocorticoid receptor deficiency by expression of cloned receptor cDNA. Cell 46:389-399.
7. Rusconi, S., Miesfeld, R., Godowski, P.J., Vanderbilt, J., Maler, B. and Yamamoto, K. (1986) Functional analysis of cloned glucocorticoid receptor sequences. In "RNA Polymerase and the Regulation of Transcription", Sixteenth Steenbock Symposium. (W.S.Reznikoff, R.R. Burgess, J.E. Dahlberg, C.A. Gross, T.M. Record and M.P. Wickens, eds.), Elsevier Science Publishing, New York.
8. Godowski, P.J., Rusconi, S., Miesfeld, R. and Yamamoto, K. (1987) Glucocorticoid receptor mutants that are constitutive activators of transcriptional enhancement. Nature 325:365-368.

9. Miesfeld, R., Godowski, P.J., Maler, B. and Yamamoto, K. (1987) Glucocorticoid receptor mutants that define a small region sufficient for enhancer activation. *Science* 236:423-427.
10. Miesfeld, R., Sakai, D., Inoue, A., Schena, M., Godowski, P.J. and Yamamoto, K. (1987) Glucocorticoid receptor sequences that confer positive and negative transcriptional regulation. In: *UCLA Symposium on Steroid Hormone Action* (G. Ringold, ed.), Alan R. Liss, Inc., New York.
11. Godowski, P.J., Sakai, D. and Yamamoto, K. (1988) Signal transduction and transcriptional regulation by the glucocorticoid receptor. In: *UCLA Symposium on DNA-Protein Interactions in Transcription* (J. Gralla, ed.), Alan R. Liss, Inc., New York.
12. Godowski, P.J. and Yamamoto, K. (1988) Signal transduction and transcriptional regulation by glucocorticoid receptor-lexA fusion proteins in mammalian cells. *Science* 241:812-816.
13. Yamamoto, K.R., Godowski, P.J. and Picard, D. (1988) Ligand-regulated nonspecific inactivation of receptor function: a versatile mechanism for signal transduction. *Cold Spring Harbor Symposia on Quantitative Biology*, Volume LIII:803-811.
14. Godowski, P.J. and Picard, D. (1989) Steroid receptors: how to be both a receptor and a transcription factor. *Biochem. Pharma.* 38:3135-3143.
15. Godowski, P.J., Leung, D.W., Meacham, L.R., Galgani, J.P., Hellmiss, R., Keret, R., Rotwein, P.S., Parks, J.S., Laron, Z. and Wood, W.I. (1989) Characterization of the human growth hormone receptor gene and the demonstration of a partial gene deletion in Laion-type dwarfism. *Proc. Natl. Acad. Sci. U.S.A.* 86:8083-8087.
16. Spencer, S.A., Leung, D.W., Godowski, P.J., Hammonds, R.G., Waters, M.J. and Wood, W.I. (1990). Growth Hormone Receptor and Binding Protein. *Recent Progress in Hormone Research*, Vol. 46. pp. 165.
17. Laron, Z., Pertzalan, A., Wood, W.I., Godowski, P.J., Rotwein, P.S., Meacham, L.R. and Parks, J.S. In *New perspectives on genetic markers and diseases among the jewish people*. Oxford University Press, New York, NY. 10016, USA.
18. Christopherson, K.S., Mark, M.R., Bajaj, V. and Godowski, P.J. (1992). Ecdysteroid dependent regulation of genes in

mammalian cells by a drosophila ecdysone receptor and chimeric transactivators. Proc. Natl. Acad. Sci. USA 89:6314-6318.

19. Lokker, N.A., Mark, M.R., Luis, E.A., Bennett, G.L., Robbins, K.A., Baker, J.B. and Godowski, P.J. (1992) Structure-function analysis of hepatocyte growth factor: Identification of variants that lack mitogenic activity yet retain high-affinity receptor binding. EMBO J. 11:2503-2510.
20. Godowski, P.J. and Henner, D. (1992). *Guest Editors for: Methods: A companion to methods in Enzymology: "Protein Overproduction in Heterologous systems"*. Vol. 4:2.
21. Mark, M.R., Lokker, N.A. and Godowski, P.J. (1992). Expression and Characterization of Hepatocyte Growth Factor Receptor-IgG Fusion Proteins. J. of Biol. Chem. 267:26166-26171.
22. Godowski, P.J. (1993). Transcriptional regulation of mammary tumor virus gene expression. *Seminars in Virology: Transcriptional regulation of viruses*. Vol. 4:43-53.
23. Roos, F., Terrell, T.G., Godowski, P.J. and Schwall, R.H., (1992). Reduction of ANIT-induced hepatotoxicity by recombinant human hepatocyte growth factor. Endocrinology 131:2540-2544.
24. Lokker, N.A. and Godowski, P. (1993). Generation and characterization of a competitive antagonist of human hepatocyte growth factor (HGF/NK1). J. Biol. Chem. 268:17145-17150.
25. Zioncheck, T.F., Richardson, L., DeGuzman, G.G., Modi, N.B., Hansen, S.E. and Godowski, P.J. (1994). The pharmacokinetics, tissue localization, and metabolic processing of recombinant human hepatocyte growth factor after intravenous administration in rats. Endocrinology 134: 1879-87.
26. Mark, M.R., Scadden, D.T., Wang, Z., Gu, Q., Goddard, A. and Godowski, P.J. (1994). Rse, a novel receptor-type tyrosine kinase with homology to Axl/Ufo is expressed at high levels in the brain. J. Biol. Chem. 269: 10720-10728.
27. Lokker, N.A., Presta, L.G. and Godowski, P.J. (1994). Mutational analysis and molecular modeling of the N-terminal kringle-containing domain of hepatocyte growth factor identifies amino acid side-chains important for interaction with the c-met receptor. Prot. Eng. 7:895-903.

28. Gallo, K.A., Mark, M.R., Wang, Scadden, D.T., Gu, Q. and Godowski, P.J. (1994). Identification and characterization of SPRK, a novel SH3 domain-containing proline-rich kinase with serine/threonine kinase activity. J. Biol Chem. 269:15092-15100.
29. Nusrat, A., Parkos, C.A., Bacarra, A.E., Godowski, P.J., Delp-Archer, C., Rosen, E.M. and Madara, J.L. (1994). Hepatocyte growth factor/scatter factor effects on epithelia. Regulation of intercellular junctions in transformed and nontransformed cell lines, basolateral polarization of c-met receptor in transformed and natural intestinal epithelia, and induction of rapid wound repair in a transformed model epithelium. J. Clin. Invest. 93:2056-2065.
30. Gaudino, G., Follenzi, A., Naldini, L., Collesi, C., Santoro, M., Gallo, K., Godowski, P.J. and Comoglio, P.M. (1994) Ron is a heterodimeric tyrosine kinase receptor activated by the HGF-homolog MSP. EMBO J. 13:3524-3532
31. Webber, E.M., Godowski, P.J. and Fausto, N. (1994) In vivo response of hepatocytes to growth factors requires an initial priming stimulus. Hepatology (19)2: 489-497
32. Godowski, P.J., Mark, M.R., Chen, J., Sadick, M.D., Raab, H. and Hammonds, R.G. (1995) Revelation of the roles of protein S and Gas6 as ligands for the receptor tyrosine kinase Rse/Tyro 3. Cell (82)3: 355-358
33. Mark, M.R., Chen, J., Hammonds, G., Sadick, M. and Godowski, P.J. (1996) Characteration of Gas6, A member of the Superfamily of G Domain containing Proteins, as a Ligand for Rse and Axl. J. Bio. Chem. 271:9785-9789.
34. Li, R.H., Chen, J. Hammonds, G., Phillips, H., Armanini, M., Godowski, P.J., Sliwowski, M.X. and Mather, J.P. (1996) Identification of Gas6 as a growth factor for Human Schwann Cells. J. of Neuroscience. 16(6):2012-2019.
35. Osaka, G., Carey, K., Cuthbertson, A., Godowski, P., Patapoff, T., Ryan, A., Gadek, T., and Mordenti, J. (1996) Pharmacokinetics, Tissue Distribution, and Expression Efficiency of Plasmid [³³P]DNA Following Intravenous Administration of DNA/Cationic Lipid Complexes in Mice: Use of a Novel Radionuclide Approach. J. of Pharm. Sci. 85:612-618.
36. Banu, N., Price, D.J., London, R., Deng, B., Mark, M., Godowski, P.J., and Avraham, H. (1996) Modulation fo megakaryocytopoiesis by Human Macrophage-Stimulating Protein, the Ligand for the Ron Receptor¹. J. of Immun. 156:2933-2940.

37. Rana, A., Gallo, K., Godowski, P., Hirai, S., Ohno, S., Zon, L., Kyriakis, J.M., and Avruch, J. (1996) The mixed lineage kinase SPRK phosphorylates and activates the stress-activated protein kinase activator, SEK-1. (1996) *Journal of Biological Chemistry*. 271(32): 19025-19028.
38. Schwall, R.H., Chang, L.Y., Godowski, P.J., Kahn, D.W., Hillan, K.J., Bauer, K.D., and Zioncheck, T.F. (1996) Heparin induces dimerization and confers proliferative activity onto the hepatocyte growth factor antagonists NK1 and NK2. *Journal of Cell Biology*. 133(3):709-718.
39. Marsters, S.A., Sheridan, J.P., Pitti, R.M., Huang, A., Skubatch, M., Baldwin, D., Yuan, J., Gurney, A., Goddard, A.D., Godowski, P., and Ashkenazi, A. (1997) A novel receptor for Apo 2L/trail contains a truncated death domain. *Current Biology*. 7(12):1003-1006.
40. Zhang, D.X., Sliwkowski, M.X., Mark, M., Frantz, G., Akita, R., Sun, Y., Hillan, K., Crowley, C., Brush, J., and Godowski, P.J. (1997) Neuregulin-3 (NRG3) - A novel neural tissue-enriched protein that binds and activates ERBB4. *Proceedings of the National Academy of Sciences of the United States of America*. 94(18):9562-9567.
41. Sheridan J.P., Marsters, S.A., Pitti, R.M., Gurney, A., Skubatch, M., Baldwin, D., Ramakrishnan, L., Gray, C.L., Baker, R., Wood W.I., Goddard, A.D., Godowski, P., and Ashkenazi, A. (1997) Control of trail-induced apoptosis by a family of signaling and decoy receptors. *Science*. 277(5327):818-821.
42. Wang, M.H., Julian, F.M., Breathnach, R., Godowski, P.J., Takehara, T., Yoshikawa, W., Hagiya, M., and Leonard, E.J. (1997) Macrophage stimulating protein (MSP) binds to its receptor via the MSP beta chain. *Journal of Biological Chemistry*. 272(27):16999-17004.
43. Chen, J., Carey, K., and Godowski, P.J. (1997) Identification of Gas6 as a ligand for Mer, a neural cell adhesion molecule related receptor tyrosine kinase implicated in cellular transformation. *Oncogene*. 14(17):2033-2039.
44. Pitti, R.M., Marsters, S.A., Lawrence, D.A., Roy, M., Kischkel, F.C., Dowd, P., Huang, A., Donahue, C.J., Sherwood, S.W., Baldwin, D.T., Godowski, P.J., Wood, W.I., Gurney, A.L., Hillan, K.J., Cohen, R.L., Goddard, A.D., Botstein, D., and Ashkenazi, A. (1998) Genomic amplification of a decoy receptor for Fas ligand in lung and colon cancer. *Nature*. 396(6712): 699-703.

45. Ultsch, M., Lokker, N.A., Godowski, P.J., and Devos, A.M. (1998) Crystal structure of the NK1 fragment of human hepatocyte growth factor at 2.0 angstrom resolution. *Structure*. 6(11):1383-1393.
46. Yang, R.B., Mark, M.R., Gray A., Huang A., Xie, M.H., Zhang, M., Goddard, A., Wood, W.I., Gurney, A.L., and Godowski, P.J. (1998) Toll-like receptor-2 mediates lipopolysaccharide-induced cellular signalling. *Nature*. 395(6699):284-288.
47. Zhang, D., Frantz, G., and Godowski, P.J. (1998) New Branches of the Neuregulin Family Tree. *Molecular Psychiatry*. 3(2):112-115.
48. Gurney, A.L., Marsters, S.A., Huang, A., Pitti, R.M., Mark, M., Baldwin, D.T., Gray, A.M., Dowd, P., Brush, J., Heldens, S., Schow, P., Goddard, A.D., Wood, W.I., Baker, K.P., Godowski, P.J., and Ashkenazi, A. (1999) Identification of a new member of the tumor necrosis factor family and its receptor, a human ortholog of mouse GITR. *Current Biology*. 9(4):215-218.
49. Modlin R.L., Brightbill H.D., and Godowski P.J. (1999) The toll of innate immunity on microbial pathogens. *N Engl J Med*. 340(23):1834-5.
50. Yang R.B., Mark M.R., Gurney A.L, and Godowski P.J. (1999) Signaling events induced by lipopolysaccharide-activated toll-like receptor 2. *J Immunol*. 163(2):639-43.
51. Brightbill H.D, Libraty D.H., Krutzik S.R., Yang R.B., Belisle J.T., Bleharski J.R., Maitland M., Norgard M.V., Plevy S.E., Smale S.T., Brennan P.J., Bloom B.R., Godowski P.J, and Modlin R.L. (1999) Host defense mechanisms triggered by microbial lipoproteins through toll-like receptors. *Science* 285(5428):732-6.
52. Aliprantis A.O., Yang R.B., Mark M.R., Suggett S, Devaux B, Radolf J.D., Klimpel G.R., Godowski P, and Zychlinsky A. Cell activation and apoptosis by bacterial lipoproteins through toll-like receptor-2. *Science* 285(5428):736-9.
53. Aliprantis A.O., Yang R.B., Weiss D.S., Godowski P, and Zychlinsky A. (2000) The apoptotic signaling pathway activated by Toll-like receptor-2. *EMBO J*. 19(13):3325-36.
54. Thoma-Uszynski S., Keitscher S.M. Ochoa M.T. Bouis D.A. Norgard M.V. Miyake K., Godowski P.J., Roth M.D. and Modlin, R.L. (2000) Activation of toll-like receptor 2 on human

dendritic cells triggers induction of IL-12, but not IL-10. J Immunol. 165(7):3804-10.

55. Tapping R.I., Akashi S., Miyake K., Godowski P.J., and Tobias P.S. (2000) Toll-like receptor 4, but not toll-like receptor 2, is a signaling receptor for Escherichia and Salmonella lipopolysaccharides. J Immunol. 165(10):5780-7.
56. Arbibe L., Mira J.P., Teusch N., Kline L., Guha M., Mackman N., Godowski P.J., Ulevitch R.J., and Knaus U.G. (2000) Toll-like receptor 2-mediated NF-kappa B activation requires a Rac1-dependent pathway. Nature Immunology 1(6): 533-40.
57. Hertz C., Kiertcher S., Godowski P., Bouis D., Norgard M., Roth M., and Modlin R. (2001) Microbial lipopeptides stimulate dendritic cell maturation via toll-like receptor 2. J Immunol. 166(4):2444-50.
58. Thoma-Uszynski S., Stenger S., Takeuchi O, Ochoa M.T., Engele M., Sieling P.A., Barnes P.F., Rollinghoff M., Bolcskei PL, Wagner M., Akira S., Norgard M.V., Belisle J.T., Godowski P.J., Bloom B.R., and Modlin RL. (2001) Induction of direct antimicrobial activity through mammalian toll-like receptors. Science 291(5508): 1544-7.
59. Werts C., Tapping R.I., Mathison J.C., Chuan, T.H., Kravchenko V., Saint Girons I., Haake D.A., Godowski P.J., Hayashi F., Ozinsky A., Underhill D.M., Kirschning C.J., Wagner H., Aderem A., Tobias P.S. and Ulevitch R.J. (2001) Leptospiral lipopolysaccharide activated cells through a TLR2 dependent mechanism Nat. Immunol. 2(4): 346-352.
60. Gewirtz AT, Navas T.A, Lyons S, Godowski P.J, Madara J.L. (2001) Cutting edge: bacterial flagellin activates basolaterally expressed tlr5 to induce epithelial proinflammatory gene expression. J Immunol. 167(4):1882-5
61. Kim J, Ochoa M.T., Krutzik S.R., Takeuchi O, Uematsu S, Legaspi A.J., Brightbill H.D., Holland D, Cunliffe W.J., Akira S, Sieling P.A., Godowski P.J. and Modlin R.L. (2002) Activation of toll-like receptor 2 in acne triggers inflammatory cytokine responses. J. Immunol. 169(3):1535-41.
62. Sieling P.A., Chung W., Duong B.T., Godowski P.J. and Modlin R.L. (2003) Toll-like receptor 2 ligands as adjuvants for human Th1 responses. J Immunol. 170(1):194-200.
63. Krutzik S.R., Ochoa, M.T., Sieling P.A., Uematsu S., Ng Y.W., Legaspi A., Liu P.T., Cole S.T., Godowski P.J., Maeda Y., Sarno E.N., Norgard M.V., Brennan P.J., Akira S., Rea T.H.,

- Modlin R.L. (2003) Activation and regulation of Toll-like receptors 2 and 1 in human leprosy. *Nat. Med* 9(5):525-32.
64. Ochoa M.T., Legaspi A.J., Hatziris Z., Godowski P.J., Modlin R.L. and Sieling P.A. (2003) Distribution of Toll-like receptor 1 and Toll-like receptor 2 in human lymphoid tissue. *Immunology* 108(1):10-5.
65. Sieling P.A., Chung W., Duong B.T., Godowski P.J. and Modlin R.L. (2003) Toll-like receptor 2 ligands as adjuvants for human Th1 responses. *J Immunol.* Jan 1;170(1):194-200.
66. Hertz C.J., Wu Q., Porter E.M., Zhang Y.J., Weismuller K.H., Godowski P.J., Ganz T., Randell S.H. and Modlin R.L. (2003) Activation of Toll-like receptor 2 on human tracheobronchial epithelial cells induces the anticicrobial peptide human beta defensi-2. *J. Immunol.* 171(12):6820-6.
67. Levy O. Jean-Jacques R.M., Cywess C., Sisson R.B., Zaremeber K. A., Godowski P.J., Christianson J.L., Guttormsen H.K., Carrrol M.C., Nicholson-Weller A. and Wessels M.R. Critical role of the complement system in group B streptococcus-induced tumor necrosis factor alpha release. (2003) *Infect. Immun.* 71(11):634-53.
68. Schmidt K.N., Leung, B., Kwong M., Satyal S., Zaremeber K.A., Navas T.A. Wang F. and Godowski, P.J. (2004) APC-independent activation of NK cells by the Toll-like receptor 3 agonist double-stranded RNA. *J. Immunol.* 172(1): 138-43.
69. Iwahashi M., Yamamura M., Aita T., Okamoto A., Ueno A., Ogawa N., Akashi S., Miyake K., Godowski P.J., and Makino H. (2004) Expression of Toll-like receptor 2 on CD16+ blood monocytes and synovial tissue macrophages in rheumatoid arthritis. *Arthritis. Rheum.* 50 (5):1457-67.
70. Satyal, S., Wang F and Godowski P.J. The cytotoxicity of human NK cells activated with TLR agonists is mediated through induction of Apo2L/Trail. Submitted for Publication

Issued U.S. Patents: 50

Secreted and transmembrane polypeptides and nucleic acids (6,767,995), Filed 7/11/2001
Cytokine receptor and nucleic acids (6,740,520), Filed 9/26/2001
Antibodies against a secreted polypeptide that stimulates release of proteoglycans from cartilage (6,734,288), Filed 8/30/2001
Secreted and transmembrane polypeptides and nucleic acids (6,723,535), Filed 7/16/2001

Secreted and transmembrane polypeptides and nucleic acids
 (6,686,451), Filed 7/10/2001
 Secreted and transmembrane polypeptides and nucleic acids
 (6,644,376), Filed 7/12/2001
 Secreted polypeptides that stimulate release of proteoglycans
 from cartilage (6,642,360), Filed 5/25/2001
 Secreted and transmembrane polypeptides and nucleic acids
 (6,635,468), Filed 7/17/2001
 Tie ligand homologues (6,586,397), Filed 6/14/99
 IL-17 related mammalian cytokine polypeptides (IL-17E)
 (6,579,520), Filed 3/22/2001
 IL-17 homologous polypeptides and therapeutic uses thereof
 (6,569,420), Filed 12/20/2000
 Human interferon-epsilon: a type I interferon (6,569,420), Filed
 8/30/2001
 NL4 tie ligand homologue (6,551,822), Filed 12/8/98
 NL3 TIE ligand homologue nucleic acids (6,426,218), Filed
 10/16/00
 Tie ligands (6,420,542), Filed 6/14/99
 NL4 tie ligand homologue nucleic acid (6,413,770), Filed 8/19/98
 Tie ligands (6,372,491), Filed 2/23/00
 Tie ligand homologues (6,368,853), Filed 6/14/99
 TIE ligand homologue antibody (6,350,450), Filed 8/19/98
 Tie receptor tyrosine kinase ligand homologues (6,348,351), Filed
 4/1/99
 Ligand homologues (6,348,350), Filed 8/28/98
 Type I interferons (6,299,877), Filed 12/7/98
 Human interferon-epsilon: a type I interferon (6,299,869), Filed
 6/17/99
 Kinase receptor activation assay (6,287,784), Filed 10/13/99
 Variant gas6 polypeptides (6,255,068), Filed 5/31/95
 ErbB4 receptor-specific neuregulin related ligand antibodies and
 uses
 therefor (6,252,051), Filed 7/30/98
 Compositions comprising gas6 polypeptides and articles of
 manufacture comprising the same (6,211,142), Filed 3/10/95
 Human interferon-epsilon (IFN-epsilon), a type I interferon
 (6,200,780),
 Filed 12/7/98
 Mer receptor activation by gas6 (6,169,070), Filed 9/19/96
 ErbB4 receptor-specific neuregulin related ligands and uses
 therefor (6,121,415), Filed 7/24/97
 Nucleic acids encoding protein tyrosine kinases (6,096,527),
 Filed 5/22/95
 Nucleic acids encoding NL-3 (6,074,873), Filed 8/28/98
 Tie ligand homologues (6,057,435), Filed 10/29/97
 Tie ligand homologues (6,030,831), Filed 9/19/97
 Kinase receptor activation assay (6,025,145), Filed 1/20/95
 Protein tyrosine kinases (6,001,621), Filed 12/20/93
 Tie ligands homologues (5,972,338), Filed 9/19/97
 Rse receptor activation (5,955,420), Filed 5/10/95

Kinase receptor activation assay (5,914,237), Filed 5/15/95
Kinase receptor activation assay (5,891,650), Filed 5/15/95
Hepatocyte growth factor protease domain variants (5,879,910),
Filed 2/9/94
Receptor activation with inactive hepatocyte growth factor
ligands (5,770,704), Filed 1/31/97
Kinase receptor activation assay (5,766,863), Filed 8/5/95
Receptor activation with hepatocyte growth factor agonists
(5,763,584),
Filed 5/5/95
Antibodies specific for Rse receptor protein tyrosine kinase
(5,709,858),
Filed 5/22/95
Methods and kits using macrophage stimulating protein
(5,696,086),
Filed 11/3/94
Methods and kits using macrophage stimulating protein
(5,696,086),
Filed 11/3/94
Single-chain hepatocyte growth factor variants (5,580,963), Filed
2/9/94
Hepatocyte growth factor variants (5,547,856), Filed 7/13/93
Single-chain hepatocyte growth factor variants (5,316,921), Filed
5/18/92

Patent Applications

>1600 Patent Applications pending covering novel secreted and
transmembrane proteins

Curriculum Vitae
Paul J. Godowski

REFERENCES:

Dr. Robert L. Modlin
University of California, Los Angeles
Division of Dermatology
52-121 CHS
10833 Le Conte Avenue
Los Angeles, CA 90095
RModlin@mednet.ucla.edu

Dr. Arturo Zychlinsky
Max Planck Institute for Infection Biology
Schumannstrasse 21/22
Campus Charité Mitte
Berlin D-10117
Germany
zychlinsky@mpiib-berlin.mpg.de

Dr. Dennis Henner, Ph.D.
Former Sr. Vice President of Research at Genentech
Currently General Partner MPM Capital
601 Gateway Boulevard
Suite 350
South San Francisco, CA 94080
(650) 553-3317
dhenner@mpmcapital.com

Joffre Baker, Ph.D.
Former Vice President of Discovery Research at Genentech
Currently Chief Scientific Officer at Genomic Health
301 Peneobscot Drive
Redwood City, CA 94063
(650) 556-9300